

AmericanAirFilter[®]
DuraShield[™] Cartridge Filter

High Efficiency "Nanofiber" Media

MERV 15 Dust Collection



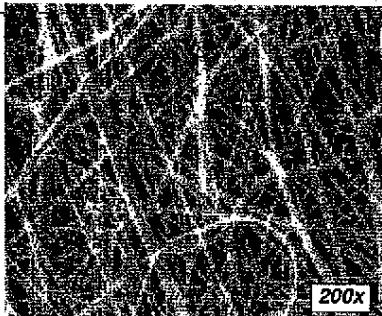
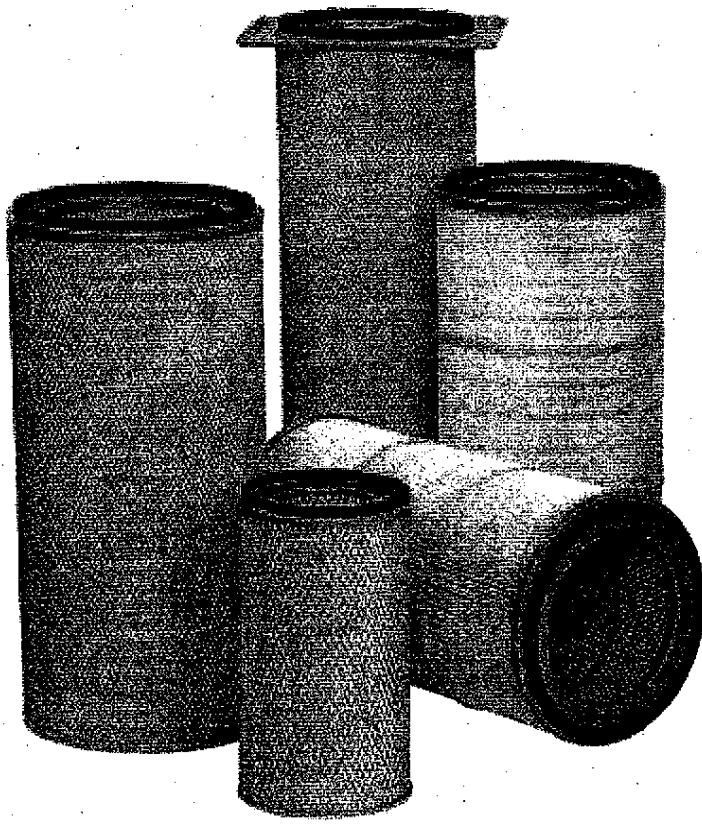
Better Air is Our Business[®]

American Air Filter

DuraShield® Cartridge Filter

The DuraShield Advantage

- *Meltblown nanofiber surface layer*
- *Higher initial efficiency*
- *MERV 15 filtration efficiency – best in the industry*
- *Highest durability for hostile contaminants and difficult applications*
- *Surface loading for superior dust release*
- *Enhances dust collector performance*
- *Provides healthy in-plant air*
- *Exceeds NIOSH and OSHA codes*
- *Strong polyester reinforced base media*
- *High moisture resistance*
- *Engineered for rugged industrial environments*
- *Low pressure drop reduces energy costs*
- *Increased pulse-clean effectiveness for long-lasting filter life*



AAF DuraShield Nanofiber layer

Durable Finest Quality Media

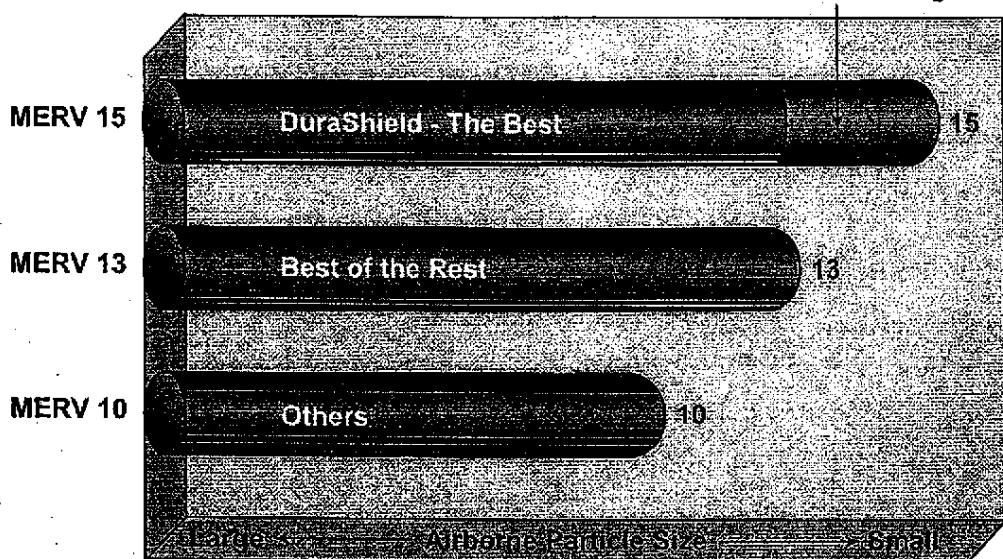
Scientifically developed to collect submicron dust particles on the surface, DuraShield media is made of a proprietary high-strength, polyester reinforced media with a meltblown outer surface layer of miniature nanofibers. This outer layer provides surface loading of particulate for optimum release during pulse cleaning. Additionally, DuraShield media is specifically constructed to withstand the rigors of pulse cleaning. DuraShield media has exceptional burst strength for unsurpassed resistance to abrasion and rupture. Synthetic fibers throughout the media will not disintegrate, unlike some surface-bonded media. Consistent, long-lasting performance is guaranteed throughout the life of the media. DuraShield cartridge filters are engineered for energy-efficient, continuous operation in harsh industrial environments with superior dust release.

Maximum Filtration Efficiency

Constructed to withstand the rigors of pulse cleaning, AAF cartridge filters provide maximum efficiency on submicron sized particles with low energy requirements and minimal operating cost. All AAF DuraShield cartridge filters are guaranteed to meet rated performance standards based on industry accepted test methods.

Minimum Efficiency Reporting Value (MERV)

The DuraShield Advantage!!!



MERV Rating and Respirable Dust

MERV defines the minimum filtration efficiency a filter will provide during its useful service life. Performance is analyzed through six precisely measured dust loads for particles sized in the range of 0.3 – 10.0 microns. The higher the MERV rating the more efficient the filter is at trapping small, respirable particles.

This is extremely important when considering respirable fraction sized particles. The respirable fraction is the portion of dust that reaches the gas exchange region of the lungs.

In other words, these are the size of particles that are breathed into the lungs and retained. The respirable fraction is typically defined as particles in the range of 0.5 to 10 microns in diameter. The smaller the particles the deeper they penetrate into the respiratory tract.

MERV Rating Classifications

MERV 8	MERV 9	MERV 10	MERV 11	MERV 12	MERV 13	MERV 14	MERV 15	Typical Contaminants
3-10 μm	$\geq 70\%$	$\geq 85\%$	$\geq 85\%$	$\geq 85\%$	$\geq 90\%$	$\geq 90\%$	$\geq 90\%$	Cement dust, mold, powdered milk
1-3 μm		$\leq 50\%$	50% to 65%	65% to 80%	$\geq 80\%$	$\geq 90\%$	$\geq 90\%$	Lead dust, coal dust, auto emissions
0.3-1 μm					$\leq 75\%$	75% to 85%	85% to 95%	All bacteria, most smoke, insecticide dust, most paint pigments, cooking oil, welding fumes

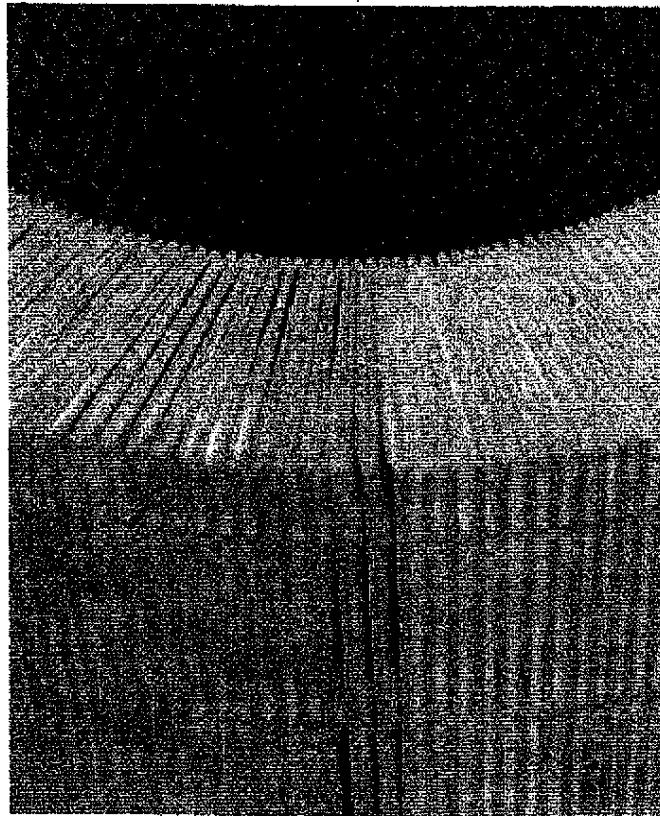
American Air Filter

DuraShield™ Cartridge Filter

Built to Exacting Specifications

The DuraShield cartridge filter was specifically engineered to ensure media pack integrity and maximum surface area exposure to dust-laden air.

Galvanized steel end caps are bonded to the media to form a solid assembly. Pleat stabilization, utilizing precise glue-bead spacing, ensures uniform distance between the pleats and superb dust release during pulse cleaning. Corrosion-resistant galvanized steel screens hold the pleated media rigidly in place to minimize flexing during the reverse-pulse mode.



Improved System Performance

DuraShield cartridge filters are available for most manufacturers' dust collectors, allowing you to greatly improve performance of your existing dust collection system.

AAF World-Class Quality

Manufactured to ISO 9001:2000 quality standards, each AAF cartridge filter element provides outstanding performance and value.

AAF DuraShield cartridge filters are fully inspected throughout the manufacturing process from incoming raw materials to finished products. All AAF DuraShield cartridge filters are individually quality inspected prior to shipping.

DuraShield Media Properties

Media Substrate:	Cellulose/Polyester Blend
Particulate Release:	Nanofiber Surface Layer
Minimum Efficiency Reporting Value:	ASHRAE MERV15 / EN779 F9
Pressure Drop Characteristics:	Low Energy
Max Operating Temperature:	170°F/76°C
Flame Retardant:	Optional
Applications:	Highest filtration efficiency on very fine, sub-micron particulate
Available for Other Collectors:	Torit, Farr, UAS and others



Better Air is Our Business®

10300 Ormsby Park Place, Suite 600
Louisville, Kentucky 40223-6169
www.aafintl.com

Customer Service 800.477.1214
Fax 800.254.3019

ISO-9001 Certified Firm

AAF has a policy of continuous product research and improvement and reserves the right to change design and specifications without notice.

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APC-1-106 AUG '06 VI 5M

AAF FILTER PERFORMANCE DATA

RP-531 TEST

The data presented here resulted from tests performed by Air Filter Testing Laboratories, Inc. (AFTL), a nationally recognized independent testing laboratory.

The test was performed using an array of standard OptiFlo cartridge filters mounted in a size 3RC12 OptiFlo filter enclosure. The cartridges were subjected to continuous pulsing in order to fully represent normal operating conditions. The particle count method was used to obtain the cartridge efficiency for various specific particle sizes.

Filter: OptiFlo Cartridge
AAF Part number: 1658301-001
Filtration media: 80% Cellulose - 20% Polyester blend
Test protocol: The test was performed in accordance with
ASHRAE Research Paper RP-531 using
Atomite test dust
Test duration: 350 Hours
AFTL Test Report #: 9212

<u>Particle size</u>	<u>Filtration efficiency</u> <u>%</u>
From 0.3 - 0.4 microns	99.995
From 0.4 - 0.5 microns	99.996
From 0.5 - 0.6 microns	99.998
From 0.6 - 0.8 microns	99.998
Greater than 0.8 microns	99.999

ASHRAE 52.1-1992 TEST

An identical filter cartridge was also tested in accordance with ASHRAE test standard 52.1-1992 (reference AFTL report # 9112) using atmospheric test dust. This is a static non-pulsed test. The dust spot efficiencies are as shown at the referenced filter cartridge pressure drops:

Initial	51.9%
At 1 inch W.G.	90.2%
At 2 inches W.G.	98.4%
At 4 inches W.G.	99%

HEPA FILTER

AstroSeal® Type S

**High Quality
Side Access Systems
for High Efficiency
Particulate Air
(HEPA) Filter**

Designed to meet the stringent requirements of HEPA filter applications, AstroSeal Type S housings are engineered to perform reliably even in the toughest environments. The AstroSeal Type S was specifically developed to perform as efficiently as your HEPA filters. The innovative design ensures uniform and constant pressure against the sealing surface of the HEPA filter. Type S housings are available with prefilter tracks to meet the exacting specifications of HEPA filtration.

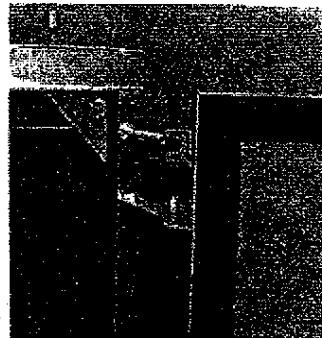
INDUSTRIAL WELDED CONSTRUCTION FOR RELIABLE PERFORMANCE

■ Standard Construction

14 gauge steel, intermittent welding with caulking for up to 10" positive or negative pressure. Galvanized or 304 Stainless Steel.

■ Optional Construction

14 gauge steel, continuously seal-welded for up to 20" positive or negative pressure. Galvanized or 304 Stainless Steel.



AstroSeal Type S housing with access door open shows how the door rests on the pin hinge. The locking bolt and large gasket on the inside of the door are also shown.

■ Reinforced Doors:

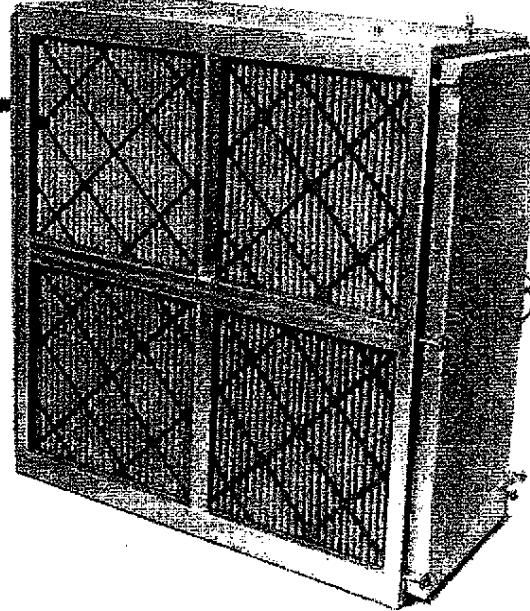
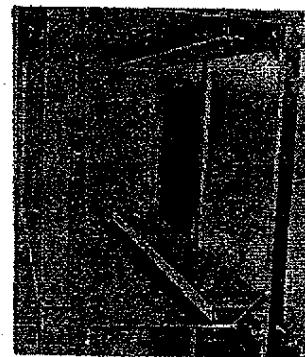
Standard 2" deep hinged access doors have internal welded reinforcement. The unique pin type hinge allows the doors to be precisely aligned prior to closure. A large, 1-1/2" wide neoprene rubber gasket surface forms the proper seal with "finger pressure" locking knobs. Each door has two large welded handles for ease of opening or lift off.

■ UNSURPASSED SEALING INTEGRITY

Factory pressure testing of the housing and filter sealing surfaces guarantees complete HEPA filtration integrity.

■ Gasket Seal Model

Gasket seal Type S housings have a rugged, crank lock mechanism which delivers over 1400 lbs. of force on each filter cartridge. This manual mechanism is actuated from the side of the unit and permits visual observation of gasket compression as pressure is applied. Each mechanism handles up to three filters wide. The crank mechanism is removable for easy cleaning.

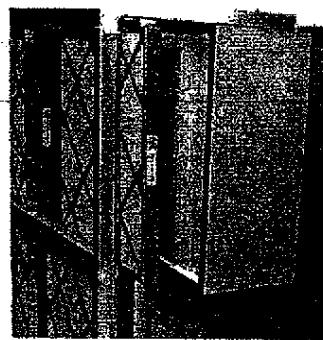


■ Gel Seal Model

The gel seal model has a knife-edge sealing surface for HEPA filters with a gel filled trough. The locking mechanism is a lever actuated type compatible with extractor clips on the filters.

PREFILTER CAPABILITY

Type S housings are available with a 2" or 4" wide prefilter track. Blank off panels are provided to prevent prefilter bypass. Prefilters are accessed through the final filter access door.



Two-inch AAF AmAir® pleated filters are shown installed in the prefilter track on the upstream end of the housing in front of AstroCel® HCX final filters.

ASTROCEL® HEPA FILTERS

Available in a wide range of efficiencies, cell side materials, and separator designs, AAF manufactures and tests AstroCel filters to fit Type S housings.

AmericanAirFilter®

AstroSeal® Type S**NUMEROUS OPTIONS FOR
INSTALLATION FLEXIBILITY****■ Double Door Accessibility**

A second door is available on units up to three filters wide. Two doors are standard on units 4 through 6 filters wide.

■ One-Half Size Units

Housings are available in one-half sizes (12" increments). Sizes 1/2 through 3 filters high; sizes 1/2 through 6 filters wide.

■ Insulation

Insulation consists of 2" thick, 4 pound density mineral wool. It is completely covered with the same material as the housing (14 gauge galvanized or stainless steel).

■ Weather Cover

For outside service a welded cover is available with a pitched top for precipitation runoff. Weather cover is standard on insulated units.

■ Pressure Testing

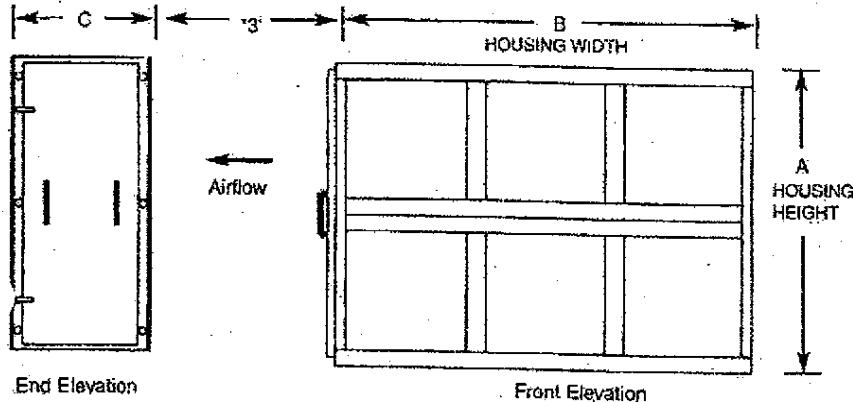
Factory testing of the housing and filter sealing surfaces up to 10" W.G.

■ Static Taps

Taps across the filter sections are factory installed and plugged. Also available with a resistance gauge, shipped loose or installed.

■ Test Port

For in-place DOP field testing, a 1/2" welded test port is available located upstream of the filters.

ASTROSEAL TYPE S HOUSING DIMENSIONS**ASTROSEAL TYPE S HOUSING DATA** Airflow Capacity (CFM)

Filter Size	Capacity in CFM*				Filter Quantity	Housing Weight lbs
	Standard AstroCell® @ 1" W.G.	Standard AstroCell® @ 1/4" W.G.	High Capacity HCX® @ 1" W.G.	High Capacity HCX® @ 1/4" W.G.		
1x1	1050	1450	1500	2000	1	130
1x2	2100	2900	3000	4000	2	200
1x3	3150	4350	4500	6000	3	270
1x4	4200	5800	6000	8000	4	360
1x6	5250	7250	7500	10000	5	450
1x6	6300	8700	9000	12000	6	520
2x1	2100	2900	3000	4000	2	210
2x2	4200	5800	6000	8000	4	310
2x3	6300	8700	9000	12000	6	420
2x4	8400	11600	12000	16000	8	580
2x5	10500	14500	15000	20000	10	690
2x6	12600	17400	18000	24000	12	800
3x1	3150	4350	4500	6000	3	290
3x2	6300	8700	9000	12000	6	430
3x3	9450	13050	13500	18000	9	570
3x4	12600	17400	18000	24000	12	800
3x5	15750	21750	22500	30000	15	940
3x6	18900	26100	27000	36000	18	1080

*Interpolate for half sizes

**Clean filter static pressure loss

Housing Size	Height A	Housing Size	Width B
1/2	15-1/8"	1/2	1-1/8"
1	2-3/4"	1	2-1/8"
1 1/2	3-9/16"	1 1/2	3-1/8"
2	4-1/8"	2	4-1/8"
2 1/2	5-4-5/16"	2 1/2	5-1/8"
3	6-4-5/16"	3	6-1/8"
3 1/2	7-1/4"	3 1/2	7-1/4"
		4	8-1/4"
		4 1/2	9-1/4"
		5	10-1/4"
		5 1/2	11-1/4"
		6	12-1/4"

Filter Depth	Housing Depth C
None	2-1/2"
2"	25"
4"	27"

10300 OPMSBY PARK PL STE 600
LOUISVILLE KY 40223-5169
P O BOX 35690
LOUISVILLE KY 40232-5690
www.aafintl.com

For Additional Information On AAF Products,
Call The Answer Center
800.477.1214

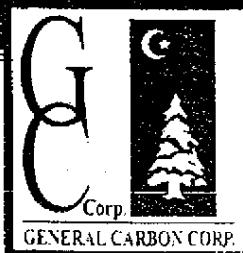
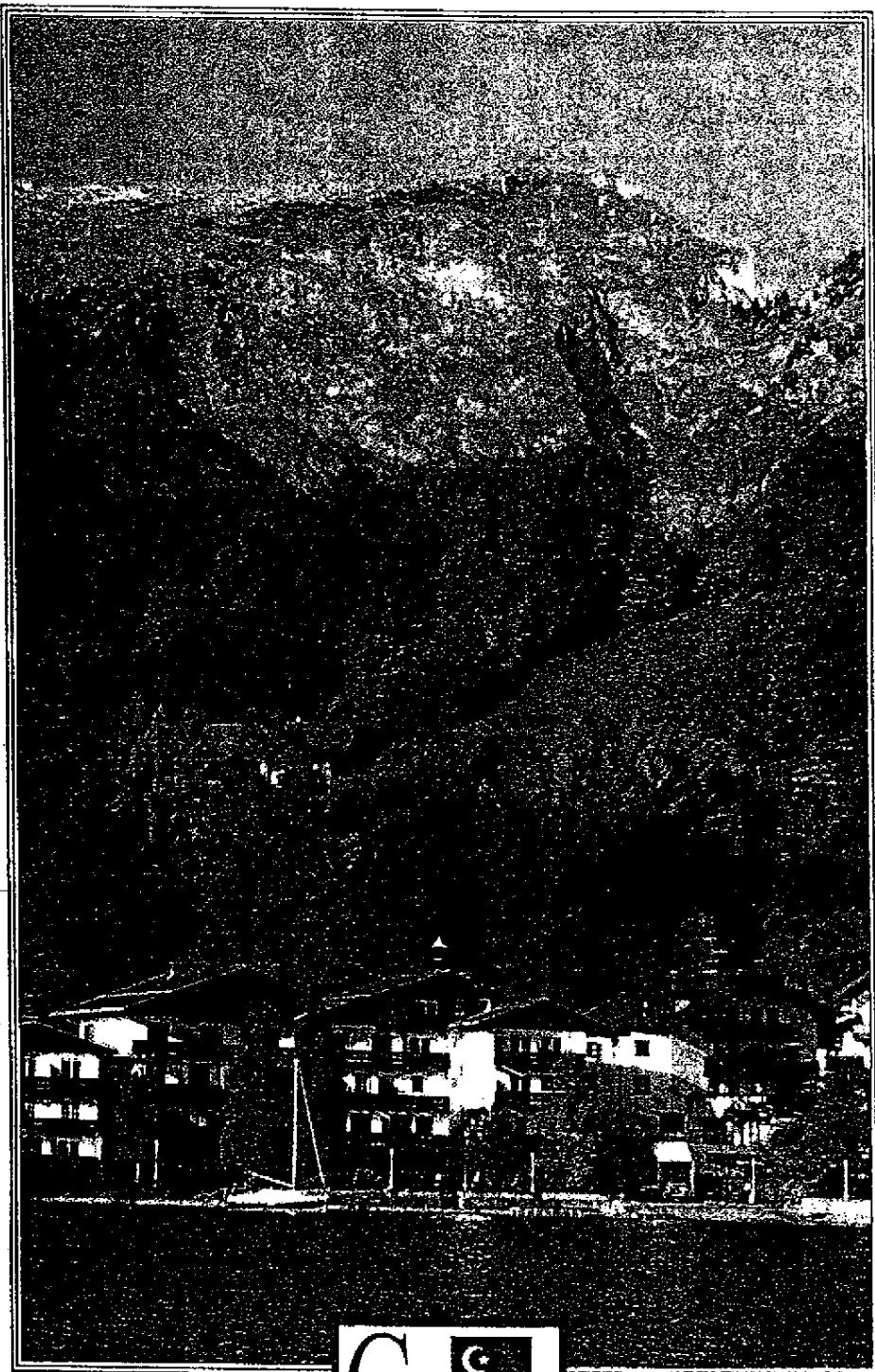


REVISIONS																													
(A) HOUSING WIDTH REVISED. 1. FILTER 5/12/94 ✓ HOUSING HEIGHT REVISED. 2. DIMENSIONS 7/16/94 ✓	(C) NOTE B ADDITIONAL INDEX REVISED. IN 5/12/94 ✓																												
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CARBON HOUSING

GENERAL CARBON CORP.

Cleaning The World With Activated Carbon



33 Paterson Street * Paterson, NJ 07501 * Tel: (973) 523-2223 * Fax (973) 523-1494

Website: www.generalcarbon.com E-Mail: sales@gcgeneralcarbon.com



The General Carbon Corporation

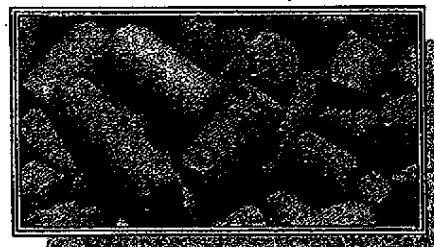
The General Carbon Corporation

is a full service carbon company. We offer a complete line of activated carbons and related filtration equipment for all applications. We can also provide you with a complete service program for existing carbon systems which includes carbon changeout and regeneration. Spent carbon is reactivated at our own plant. In business for over 45 years, General Carbon can provide

you with any technical assistance that you may require.

Activated Carbons

General Carbon sells a wide range of high quality virgin and reactivated carbons for the filtration of vapor and liquid streams.



These Include:

- * Granular**
- * Coconut Shell Base**
- * Powdered**
- * Coal Base**
- * Pelletized**
- * Wood Base**
- * Impregnated**

Carbon Systems

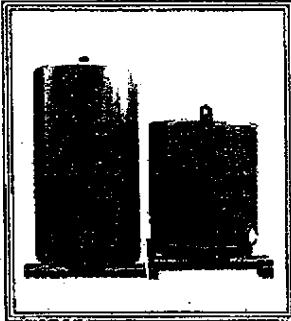
Purification Barrels

"The General" Pollution control Barrels are designed to purify low-flow rates of air and water in an economical way. They are available in 55, 85 and 110 gallon sizes.

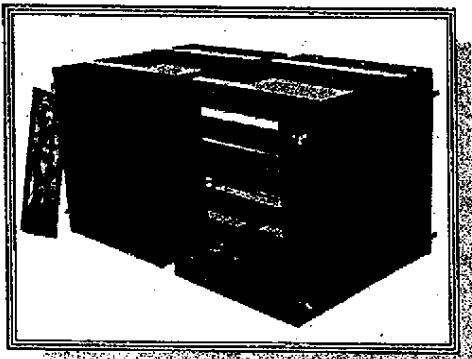
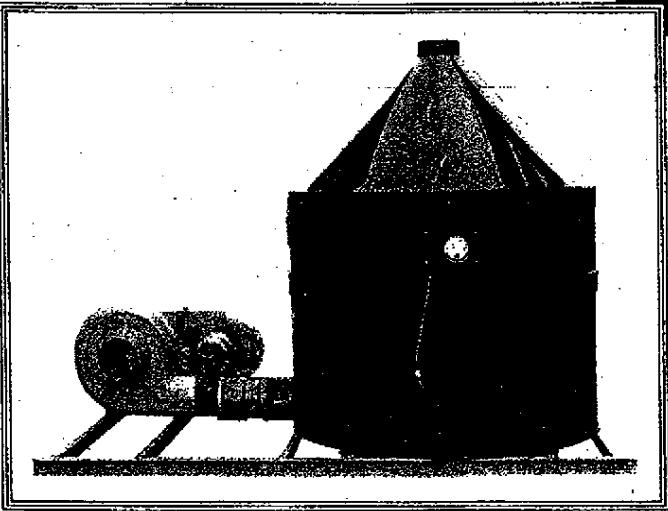


Vapor and Liquid Phase Vessels and Systems

For higher flows, **General Carbon** carries a complete line of carbon vessels and systems made from FRP, Polyethylene or Steel. Adsorbers and systems can be made to specification and are available for lease.



New and Replacement Carbon Filters



We produce new and replacement carbon filters for all manufacturers' original equipment. **General Carbon** also custom manufactures special sized panels, cells, grids and cannisters.

GENERAL CARBON CORP.

Cleaning The World With Activated Carbon



Complete Carbon Service Program

Carbon Changeouts

The General Carbon Corp. has the capacity to perform complete carbon changeouts either onsite or at our facility. This includes the removal of the spent carbon and its replacement with new carbon. Onsite changeouts are performed by our own OSHA certified field technicians.

Regeneration Of Activated Carbon

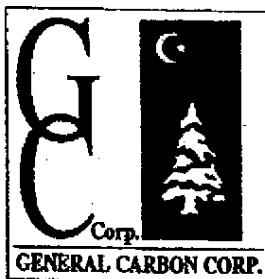
We offer pool or custom regeneration services for spent activated carbon at our own state of the art reactivation facility. General Carbon can provide this service for carbon whether it is manifested as a hazardous waste or not. Spent carbon is handled in accordance with all federal and state environmental laws.



33 Paterson Street * Paterson, NJ 07501 * Tel: (973) 523-2223 * Fax (973) 523-1494

Website: www.generalcarbon.com E-Mail: sales@generalcarbon.com

CLEANING THE WORLD WITH ACTIVATED CARBON



GENERAL CARBON CORPORATION

Allow us to take the time to introduce ourselves. We are the General Carbon Corporation and we have been in the activated carbon business for over 40 years. We carry a large inventory of carbon for the treatment of both air and water. We have many different types of carbon available for immediate shipment, including pelletized, granular, powdered and reactivated, made out of several different materials such as coal, coconut shell and wood. Orders of all sizes are welcomed.

Aside from the carbon we inventory, we also carry a complete line of carbon adsorption equipment. Vessels, canisters and panels of all sizes are available for the purification of vapor and liquid streams. General Carbon can also design and build custom engineered systems for unique applications. In addition to the selling of equipment, we also have the capability to service all existing carbon systems on site. This includes the removal and regeneration of the spent carbon, and its replacement with new carbon.

Spent carbon is sent to our brand new state of the art reactivation facility in southern New York State. Utilizing our patented electrical resistivity furnaces allows us to reactivate spent carbon more effectively and economically than existing technologies.

General Carbon also specializes in impregnated carbons, and in specialty packaging. We have on site the machinery to impregnate carbon for specific needs. In addition, we possess the equipment to package activated carbon in most any way for most any custom application.

With our 40+ years of experience, we are capable of providing any technical advice needed. Complete Laboratory Facilities are available. Thank you for taking the time to allow us to familiarize you with General Carbon. If there is anything that we can do for you, please do not hesitate to contact us.

DOREX 2000S & 2000S2

side access carbon filters

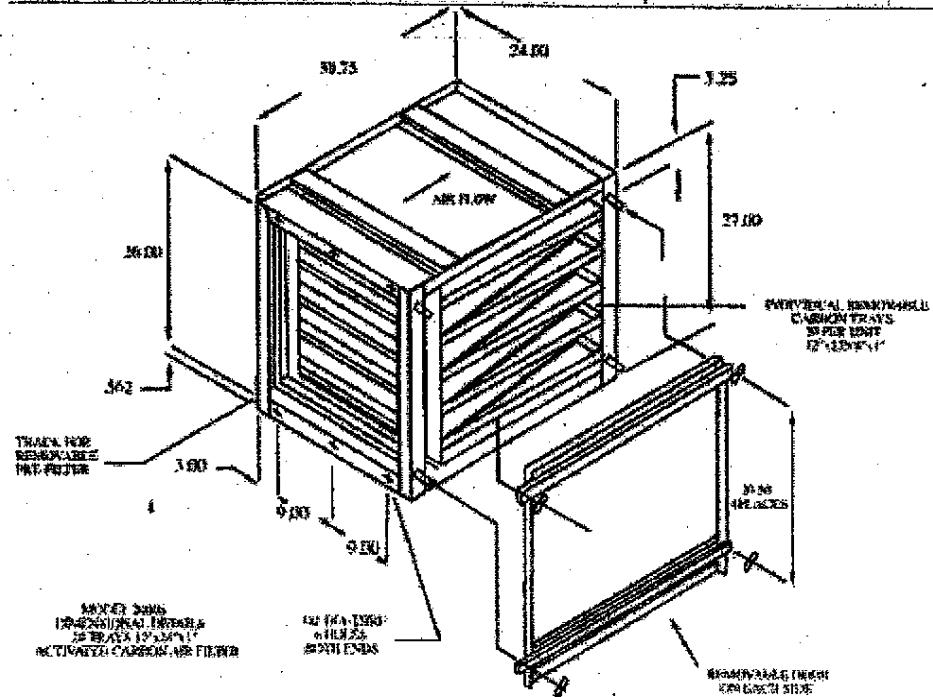
Features:

- High single-pass efficiency
- 500 ft/mn design velocity
- .25 wg resistance at 500 ft/mn
- Trays can be loaded or unloaded from either side of housing
- Units contain a two inch pre-filter track
- Standard trays are 14 gauge, cold rolled steel with a baked black enamel finish. Stainless steel, epoxy coated or plastic trays are optional.
- Units can be bolted directly together or stacked to fill individual needs.

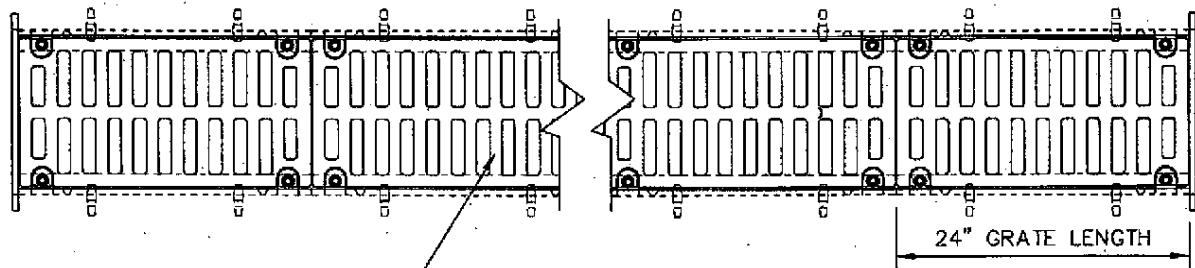
Specifications:

The 2000S and 2000S2 are side access housings which are used to treat high airflow rates containing limited levels of contaminates. They are both unique in design and versatility. Being modular in design, they can be bolted together or stacked like building blocks to fill various needs. While in this configuration, all filter tracks will align so the side-loading feature will not be lost. The 2000S2 is similar to the 2000S, but holds more carbon for increased removal capacity.

Unit Designation	Number of Carbon Trays	Rated Flow at .25 W.G.	Lbs. of Carbon (Approximate)
2000S	20	2000 C.F.M.	90
2000S2	8	2000 C.F.M.	132

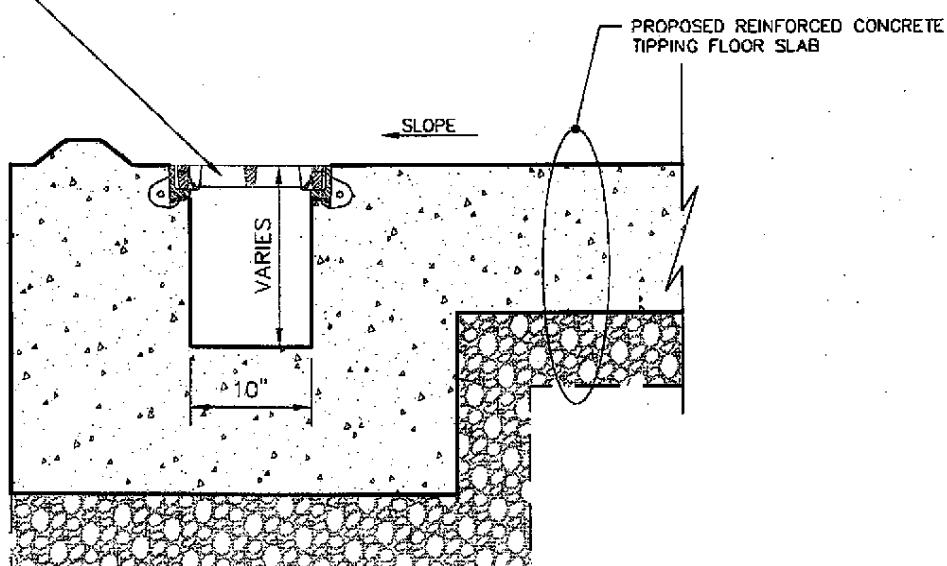


APPENDIX C
TRENCH DRAIN SPECIFICATIONS



PLAN VIEW

DUCTILE IRON GRATE AND FRAME
GRATE BOLTED TO FRAME
w/ STAINLESS STEEL HEX HEAD CAP
SCREW AND WASHER



SECTION



CORNERSTONE
Environmental Group, LLC

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MHF LOGISTICAL SOLUTIONS
5800 WESTSIDE AVENUE - SOIL TRANSLOAD FACILITY
RINSE WATER COLLECTION
TRENCH DRAIN DETAIL

FIGURE NO.
1
PROJECT NO.
070159

NOTE: When specifying/ordering grates, refer to "CHOOSING THE PROPER INLET GRATE" on pages 108-109. For FREE OPEN AREAS of Neenah Grates, refer to pages 326-330.

Airport Trench Drains for Hangars, Gates and Taxiways

Heavy Duty

It is important to remove storm water from hanger areas, taxiways and ground level loading where passengers are present and in areas where aircraft must pass. These trench drains are capable of supporting the heavy wheel loads of today's commercial aircraft. For larger trench widths or greater loading requirements, please contact our Product Engineering Dept.

Grates are bolted to frames.

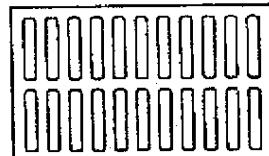
Note: Rib depths on larger span trench grates and covers exceed the noted "B" dimension - please contact Neenah for detail drawings.

Dimensions in Inches			
Catalog No.	A	B	C
R-4990-AA	8	2	6
R-4990-BA	10	2	8
R-4990-CA	12	2	10
R-4990-DA*	14	2	12
R-4990-EA	17	2	15
R-4990-FA	20	2	18
R-4990-HA**	26	2	24
R-4990-KA2**	34	2	31
R-4990-0A	51	2	48

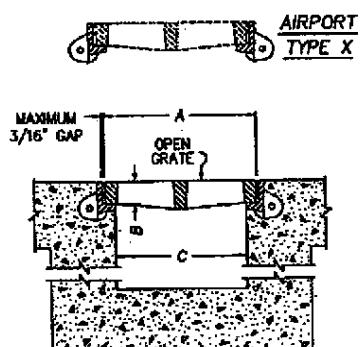
Type X frame is supplied in Gray Iron Class 35. Refer to R-4990 Series on pages 286 for details and installation instructions.

* Type D solid cover available.

** Type A grate available with Permagrip.



TYPE A
GRATE OPENINGS



R-4999 Vane Style Grates for Bolted Transverse Drainage Structures

Heavy Duty

Illustrating R-4999 bolted trench series with Type L grate.

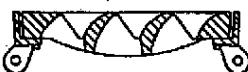
Dimensions in Inches				
Catalog No.	A	B	C	
R-4999-L2	12	1 1/2	10	**
R-4999-L3	14	1 1/2	12	*
R-4999-L6	23 7/8	2	21 7/8	**
R-4999-L9	28 3/4	2 1/2	26 3/4	**

This series furnished with Type L grate shown at right.

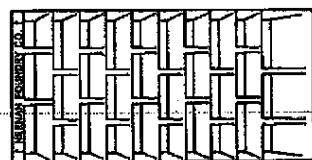
* Furnished in 2-foot increments only.

** Furnished in 1 or 2-foot increments.

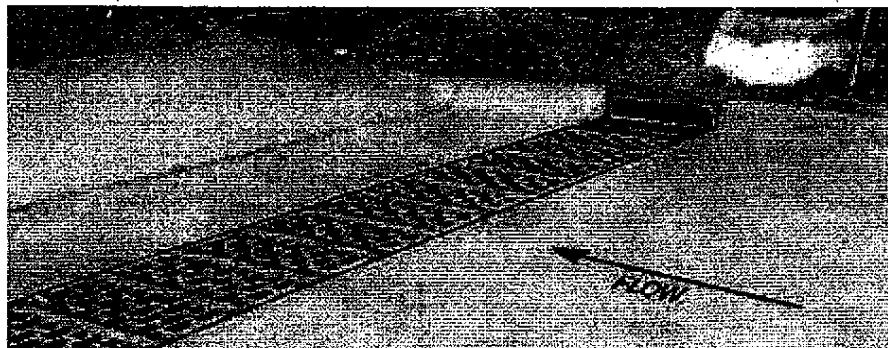
*** Furnished in 1 1/2 or 3-foot increments.

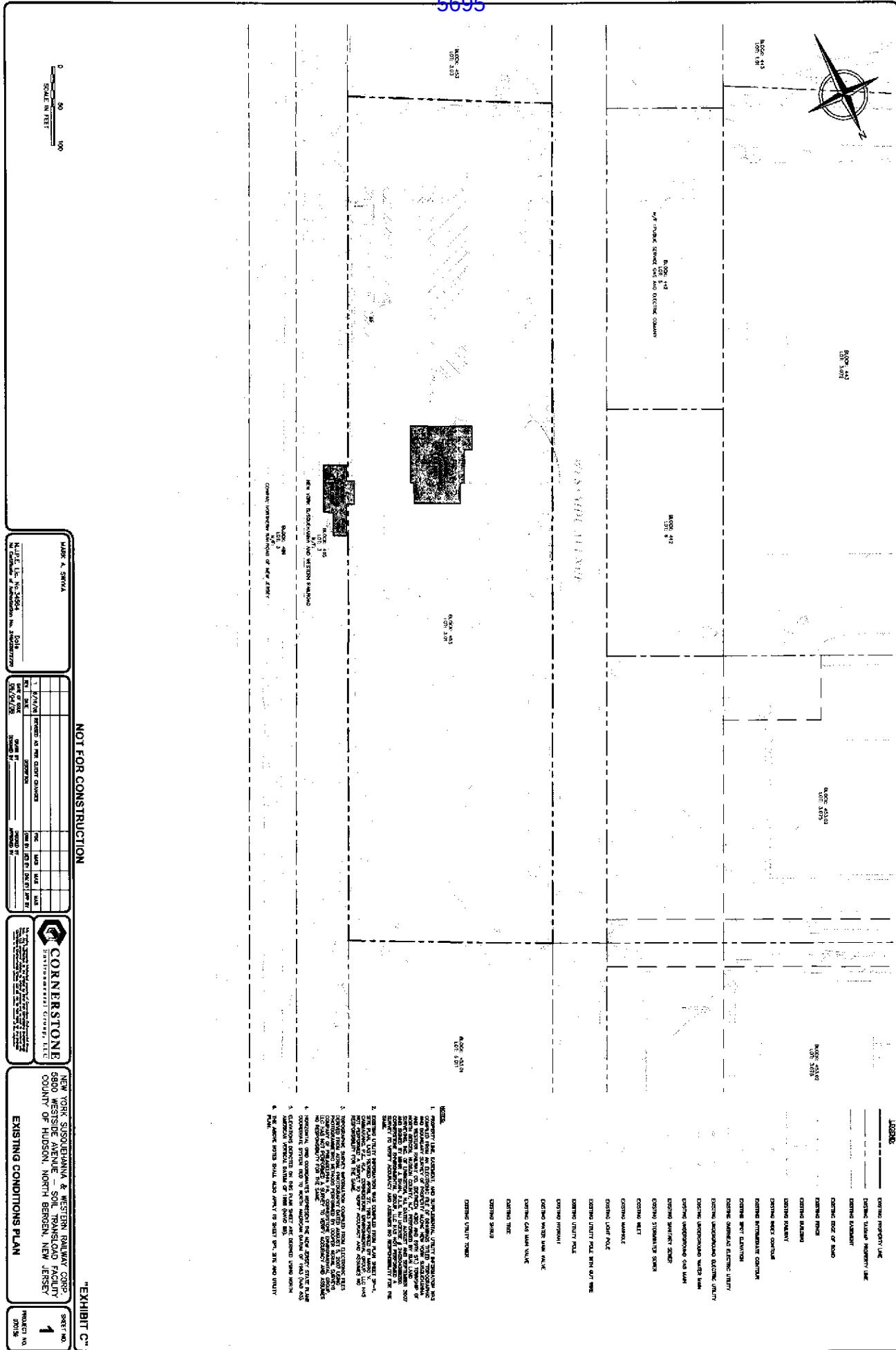


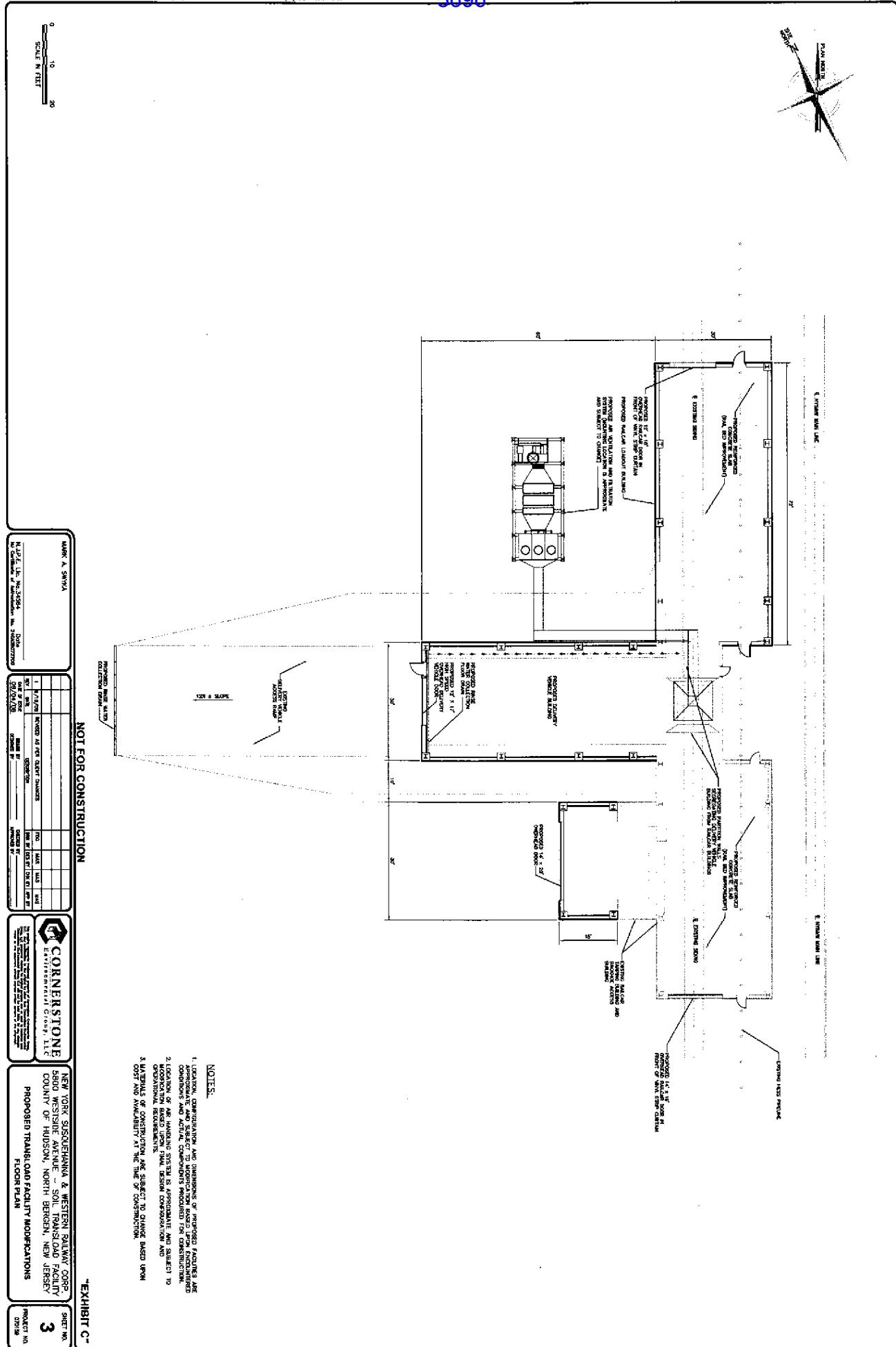
Frame Type
Type X

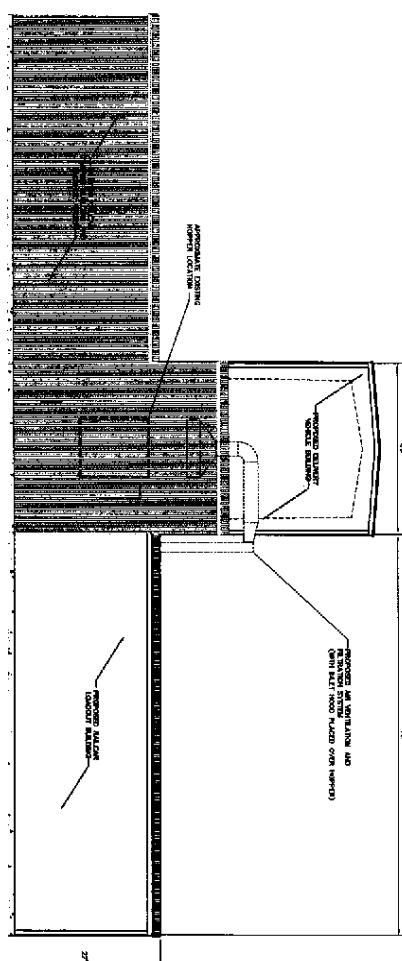


Type L grate available only on
R-4999-L2, L3, L6, and L9.



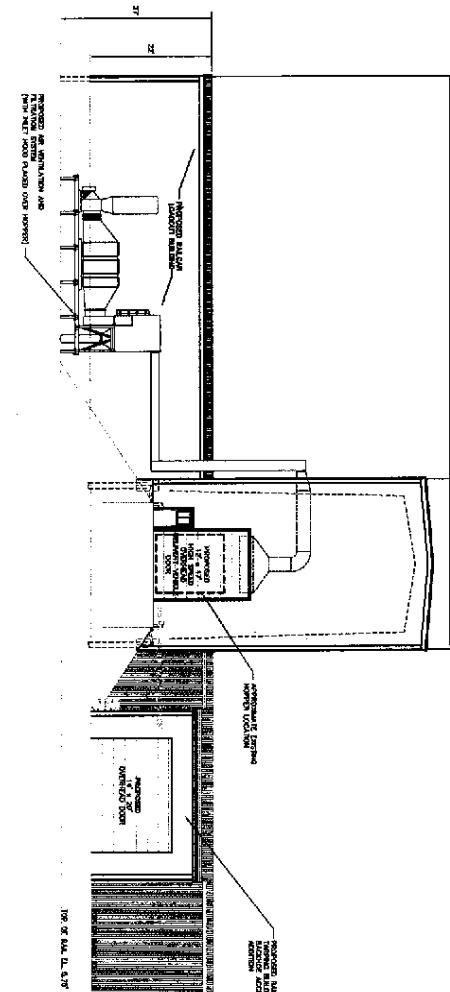






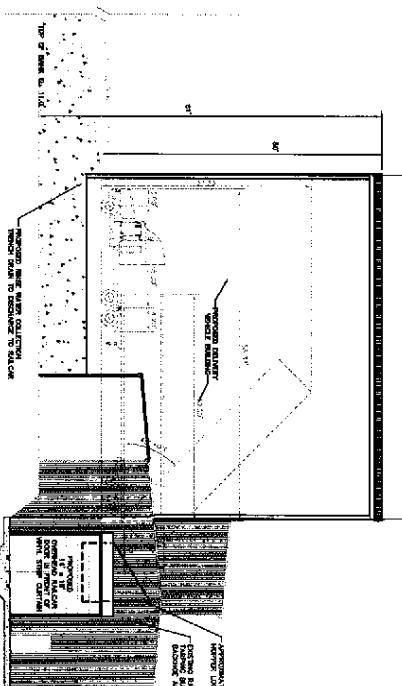
PROPOSED FACILITY MODIFICATIONS
MF Logistics - Soil Transload Facility

WEST ELEVATION
SCALE 1"-10



PROPOSED FACILITY MODIFICATIONS
MF Logistics - Soil Transload Facility

NORTH ELEVATION
SCALE 1"-10



PROPOSED FACILITY MODIFICATIONS
MF Logistics - Soil Transload Facility

SOUTH ELEVATION
SCALE 1"-10

PROPOSED FACILITY MODIFICATIONS
MF Logistics - Soil Transload Facility

EAST ELEVATION
SCALE 1"-10

MARK A. SMITH

NOT FOR CONSTRUCTION

CORNERSTONE
ENVIRONMENTAL GROUP, LLC

NEW YORK, SUSQUEHANNA & WESTERN RAILWAY CORP.

5800 WESTSIDE AVENUE - SOIL TRANSLLOAD FACILITY

COUNTY OF HUDDSON, NORTH BERGEN, NEW JERSEY

PROPOSED TRANSLLOAD FACILITY MODIFICATIONS

ELEVATIONS

"EXHIBIT C"

SHEET NO.

4

PROJECT NO.

N.J.P.L. Inc. File #34564 Date 09/17/2008
All dimensions are in feet unless otherwise specified

5698

